

AMENDMENTS TO THE CLAIMS

Claims 1-15 (Cancelled).

16. (Currently Amended) A method of correcting inclination of ICs on a semiconductor wafer, comprising:

loading the semiconductor wafer on a wafer turning member;

recognizing a first detection point and a second detection point on the semiconductor wafer by moving an image pickup camera in an X direction and a Y direction orthogonal to each other; and

correcting an inclination of all the ICs on the semiconductor wafer with respect to an X-axis and a Y-axis by rotating the semiconductor wafer in a circumferential direction thereof using the wafer turning member based on a result of said recognizing of the first detection point and the second detection point;

wherein, when the first detection point deviates within a deviation area beyond a view field of the image pickup camera, said recognizing comprises detecting the first detection point by moving the view field of the image pickup camera in a serpentine manner in the X direction and the Y direction within the deviation area starting from a first point, the first point being one of four corners of the deviation area.

17. (Previously Presented) The method of claim 16, wherein said correcting the inclination of all the ICs on the semiconductor wafer comprises simultaneously correcting the inclination of all the ICs on the semiconductor wafer.

Claim 18 (Cancelled).

19. (Currently Amended) The method of claim 18 16, wherein said recognizing the first detection point and the second detection point comprises moving the image pickup camera intervals of movement in the X direction and the Y direction, each of the intervals of movement

being equal to 1/3 of one of the X direction length of the view field and the Y direction length of the view field.

20. (Currently Amended) ~~The method of claim 16;~~ A method of correcting inclination of ICs on a semiconductor wafer, comprising:

loading the semiconductor wafer on a wafer turning member;

recognizing a first detection point and a second detection point on the semiconductor wafer by moving an image pickup camera in an X direction and a Y direction orthogonal to each other; and

correcting an inclination of all the ICs on the semiconductor wafer with respect to an X-axis and a Y-axis by rotating the semiconductor wafer in a circumferential direction thereof using the wafer turning member based on a result of said recognizing of the first detection point and the second detection point;

wherein, when the first detection point deviates within a deviation area beyond a view field of the image pickup camera, said recognizing comprises detecting the first detection point by moving the view field of the image pickup camera in a spiral manner in the X direction and the Y direction within the deviation area starting from a center point of the deviation area.

21. (Previously Presented) The method of claim 20, wherein said recognizing the first detection point and the second detection point comprises moving the image pickup camera intervals of movement in the X direction and the Y direction, each of the intervals of movement being equal to 1/3 of one of the X direction length of the view field and the Y direction length of the view field.

22. (Previously Presented) The method of claim 20, further comprising:

recognizing a third detection point for inclination correction which is included in the view field of the image pickup camera with the first detection point;

obtaining a rough inclination of the ICs based on said recognizing of the first detection point and said recognizing of the third detection point for inclination correction; and
recognizing the second detection point by moving the image pickup camera based on the rough inclination.

23. (Currently Amended) ~~The method of claim 16, further comprising:~~ A method of correcting inclination of ICs on a semiconductor wafer, comprising:

loading the semiconductor wafer on a wafer turning member;
recognizing a first detection point and a second detection point on the semiconductor wafer by moving an image pickup camera in an X direction and a Y direction orthogonal to each other;
correcting an inclination of all the ICs on the semiconductor wafer with respect to an X-axis and a Y-axis by rotating the semiconductor wafer in a circumferential direction thereof using the wafer turning member based on a result of said recognizing of the first detection point and the second detection point;
recognizing a third detection point for inclination correction which is included in the view field of the image pickup camera with the first detection point;
obtaining a rough inclination of the ICs based on said recognizing of the first detection point and said recognizing of the third detection point for inclination correction; and
recognizing the second detection point by moving the image pickup camera based on the rough inclination.

24. (Currently Amended) An apparatus for correcting an inclination of ICs on a semiconductor wafer, comprising:

a recognition device including an image pickup camera operable to freely move above the semiconductor wafer in an X direction and a Y direction orthogonal to each other, said recognition device being operable to image a first detection point and a second detection point on the semiconductor wafer, and to detect an inclination of the ICs on the semiconductor wafer with

respect to an X-axis and a Y-axis based on pickup image information obtained by said image pickup camera;

a wafer turning member on which the semiconductor wafer is to be loaded, said wafer turning member being operable to rotate the semiconductor wafer in a circumferential direction thereof;

a turning device for rotating said wafer turning member; and

a control device for controlling said turning device based on inclination information of the ICs detected by said recognition device so as to rotate the semiconductor wafer loaded on said wafer turning member to thereby correct the inclination of all the ICs on the semiconductor wafer;

wherein said control device is operable to control said recognition device such that, when the first detection point deviates within a deviation area beyond a view field of said image pickup camera, said recognition device detects the first detection point by moving the view field of said image pickup camera in a serpentine manner in the X direction and the Y direction within the deviation area starting from a first point, the first point being one of four corners of the deviation area.

25. (Previously Presented) The apparatus of claim 24, wherein said control device is operable to control said turning device so as to simultaneously correct the inclination of all the ICs on the semiconductor wafer.

Claim 26 (Cancelled).

27. (Currently Amended) The apparatus of claim 26 24, wherein said control device is operable to control said recognition device so as to move the image pickup camera intervals of movement in the X direction and the Y direction, each of the intervals of movement being equal to 1/3 of one of the X direction length of the view field and the Y direction length of the view field.

28. (Currently Amended) The apparatus of claim 26 24, wherein said control device is operable to control said recognition device so as to recognize a third detection point for inclination correction which is included in the view field of said image pickup camera with the first detection point, to obtain a rough inclination of the ICs based on the first detection point and the third detection point, and to detect the second detection point by moving said image pickup camera based on the rough inclination.

29. (Currently Amended) The apparatus of claim 24, An apparatus for correcting an inclination of ICs on a semiconductor wafer, comprising:

a recognition device including an image pickup camera operable to freely move above the semiconductor wafer in an X direction and a Y direction orthogonal to each other, said recognition device being operable to image a first detection point and a second detection point on the semiconductor wafer, and to detect an inclination of the ICs on the semiconductor wafer with respect to an X-axis and a Y-axis based on pickup image information obtained by said image pickup camera;

a wafer turning member on which the semiconductor wafer is to be loaded, said wafer turning member being operable to rotate the semiconductor wafer in a circumferential direction thereof;

a turning device for rotating said wafer turning member; and

a control device for controlling said turning device based on inclination information of the ICs detected by said recognition device so as to rotate the semiconductor wafer loaded on said wafer turning member to thereby correct the inclination of all the ICs on the semiconductor wafer;

wherein said control device is operable to control said recognition device such that, when the first detection point deviates within a deviation area beyond a view field of said image pickup camera, said recognition device detects the first detection point by moving the view field of said image pickup camera in a spiral manner in the X direction and the Y direction within the deviation area starting from a center point of the deviation area.

30. (Previously Presented) The apparatus of claim 29, wherein said control device is operable to control said recognition device so as to move the image pickup camera intervals of movement in the X direction and the Y direction, each of the intervals of movement being equal to 1/3 of one of the X direction length of the view field and the Y direction length of the view field.

31. (Previously Presented) The apparatus of claim 29, wherein said control device is operable to control said recognition device so as to recognize a third detection point for inclination correction which is included in the view field of said image pickup camera with the first detection point, to obtain a rough inclination of the ICs based on the first detection point and the third detection point, and to detect the second detection point by moving said image pickup camera based on the rough inclination.

32. (Currently Amended) The apparatus of claim 24, An apparatus for correcting an inclination of ICs on a semiconductor wafer, comprising:

a recognition device including an image pickup camera operable to freely move above the semiconductor wafer in an X direction and a Y direction orthogonal to each other, said recognition device being operable to image a first detection point and a second detection point on the semiconductor wafer, and to detect an inclination of the ICs on the semiconductor wafer with respect to an X-axis and a Y-axis based on pickup image information obtained by said image pickup camera;

a wafer turning member on which the semiconductor wafer is to be loaded, said wafer turning member being operable to rotate the semiconductor wafer in a circumferential direction thereof;

a turning device for rotating said wafer turning member; and
a control device for controlling said turning device based on inclination information of the ICs detected by said recognition device so as to rotate the semiconductor wafer loaded on

said wafer turning member to thereby correct the inclination of all the ICs on the semiconductor wafer;

wherein said control device is operable to control said recognition device so as to recognize a third detection point for inclination correction which is included in the view field of said image pickup camera with the first detection point, to obtain a rough inclination of the ICs based on the first detection point and the third detection point, and to detect the second detection point by moving said image pickup camera based on the rough inclination.